Appendix D-2
Capital Costs

Summary of RTP Light Rail Capital Costs and Ranges (in millions)

Item	Central-Louisiana		Central-Lomas-Louisiana		Central-Tramway		Central-San Mateo	
	Low	High	Low	High	Low	High	Low	High
Guideway and Trackwork	$65	$81	$64	$81	$70	$83	$65	$81
Traction Electric System	$31	$36	$30	$35	$36	$42	$31	$35
Communication	$8	$8	$8	$8	$10	$10	$8	$8
LRT Signals	$5	$7	$5	$7	$6	$8	$5	$7
Special Conditions	$15	$16	$15	$16	$15	$17	$15	$16
Stations	$11	$18	$11	$18	$11	$18	$11	$18
Maintenance Yard	$7	$10	$7	$10	$7	$10	$7	$10
CONSTRUCTION SUBTOTAL	$183	$227	$180	$225	$200	$242	$183	$225
Light Rail Vehicles	$12	$45	$12	$45	$19	$55	$12	$45
ROW	$6	$8	$6	$8	$6	$7	$6	$8
Add On Allowances	$66	$95	$65	$94	$73	$102	$66	$95
TOTAL COSTS (with 7% reserve)	$286	$401	$281	$398	$319	$434	$286	$399

Explanation of Terms

Guideway and Trackwork	Includes all items associated with the preparation of the guideway (i.e., ballasted vs. embedded track and all associated elements) Low and high is primarily the difference in the length of embedded track and the number and cost of bridges needed.
Traction Electric System	Covers the cost of installing the electrical distribution system to power the trains. The main components are the overhead catenary and the substations. Difference is in cost assumptions.
Communication	The communication system required to operate the LRT. There is no difference from low to high.
LRT Signals	LRT traffic signals, barriers needed to safely operate the LRT. They are located at intersections and at stations and are independent from the street control system. The main difference is in the number needed in the low and high options.
Special Conditions	These can include street improvements, auto traffic signals, landscaping, special studies for archaeology, contaminated soils, noise, etc.
Stations	The cost of building stations and new parking facilities to serve the new system. They are assumed to be in the center of the street. The main difference is related to the level of design and surface vs. structured parking in the low and high facilities
Maintenance Yard	The cost of building the needed maintenance yard. Difference is the size and extent of facilities provided.
Construction Total	The sum of all the above elements
Light Rail Vehicles	The cost of purchasing trains to operate on the new system. The difference is in purchasing new vs. old vehicles.
Right-of Way	This is a very preliminary estimate of row that will be need in terms of property required to implement associated parking facilities and electrical substations. Low and high difference is in the assumption about the amount of new property needed.
Add-On Allowances	This is the cost of engineering, construction management and contingencies. It is a percentage of the project cost and varies accordingly. This figure will generally decrease as the project becomes better defined.
Total Project Costs	The total cost of building the project and acquiring all the associated equipment and facilities including a 7% reserve.

Summary of RTP Bus Rapid Transit Capital Costs and Ranges (in millions)

Item	Central-Louisiana		Central-Lomas-Louisiana		Central-Tramway		Central-San Mateo	
	Low	High	Low	High	Low	High	Low	High
Guideway	$20	$22	$20	$21	$24	$27	$20	$22
Communication	$9	$9	$8	$8	$10	$10	$8	$8
BRT Signals	$5	$5	$5	$5	$6	$6	$5	$5
Special Conditions	$21	$26	$21	$26	$22	$27	$21	$26
Stations	$13	$19	$13	$19	$14	$21	$13	$19
Maintenance Facilities	$5	$7	$5	$7	$5	$7	$5	$7
CONSTRUCTION TOTAL	$94	$113	$93	$111	$104	$126	$93	$112
Vehicles	$9	$18	$9	$18	$10	$22	$9	$18
ROW	$6	$8	$6	$8	$6	$7	$6	$7
Add On Allowances	$38	$43	$38	$42	$42	$48	$38	$42
TOTAL COSTS (with 7% reserve)	$157	$195	$156	$192	$173	$217	$156	$192

Explanation of Terms

Guideway	Includes all items associated with the preparation of the guideway (i.e., modification of the street, drainage, traffic controls, etc.) Low and high reflects the difference in assumptions about the area impacted by the project.
Communication	The communication system required to operate the BRT. There is no difference from low to high.
BRT Signals	BRT traffic signals, barriers needed to safely operate the BRT. They are located at intersections and at stations and are independent from the street control system. The main difference in the low and high options is the number of stations.
Special Conditions	These can include street improvements, auto traffic signals, landscaping, special studies for archaeology, contaminated soils, noise, etc.
Stations	The cost of building stations to serve the new system. They are assumed to be in the center of the street. The main difference is related to the level of design and surface vs. structured parking in the low and high facilities
Maintenance Yard	The cost of building/modifying the needed maintenance yard. Difference is the size and extent of facilities provided.
Construction Total	The sum of all the above elements
Vehicles	The cost of purchasing buses and appurtenances to operate on the new system. Main difference is articulated buses vs. Civis-type buses.
Right-of Way	This is a very preliminary estimate of row that will be need in terms of property required to implement associated parking facilities and electrical substations. Low and high difference is in the assumption about the amount of new property needed.
Add-On Allowances	This is the cost of engineering, construction management and contingencies. It is a percentage of the project cost and varies accordingly. This figure will generally decrease as the project becomes better defined.
Total Project Costs	The total cost of building the project and acquiring all the associated equipment and facilities including a 7% reserve.